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Supplement to: Biotic Communities of the Southwest

USDA General Technical Report RM-41

David E. Brown, Charles H. Lowe, and Charles P. Pase¹

[1978]

This map illustrates, at a scale of 1:1,000,000, the major upland biotic communities (=biomes) of the "American Southwest". We consider the natural Southwest region that area shared between the U.S. and adjacent Mexico from longitudes 103° to 118° and from latitude 37° 31' to latitude 27°, including all or parts of the states of Arizona, New Mexico, Texas, Colorado, Utah, Nevada, and California and all or part of Baja California, Sonora, Chihuahua, and Coahuila.

The 27 biotic communities identified are those presented in the hierarchical ecosystem classification developed by Brown and Lowe (1974a, 1974b) and Brown, Lowe, and Pase (1977). While these units are described in terms of potential natural vegetation, faunal components also are considered. The following biotic units are shown:

ALPINE TUNDRA
PETRAN (ROCKY MOUNTAIN) SUBALPINE
CONIFER FOREST
SIERRAN SUBALPINE CONIFER FOREST
PETRAN MONTANE CONIFER FOREST
SIERRAN MONTANE CONIFER FOREST
SINALOAN DECIDUOUS FOREST
GREAT BASIN CONIFER WOODLAND
MADREAN EVERGREEN WOODLAND
CALIFORNIAN EVERGREEN WOODLAND
GREAT BASIN MONTANE SCRUBLAND
CALIFORNIAN CHAPARRAL
INTERIOR CHAPARRAL
CALIFORNIAN COASTALSCRUB
SINALOAN THORNSCRUB
SUBALPINE GRASSLANDS
PLAINS GRASSLAND and PLAINS GRASSLAND
with Shinnery Oak
CALIFORNIAN VALLEY GRASSLAND
SEMIDESERT GRASSLAND
GREAT BASIN DESERTSCRUB
MOHAVE DESERTSCRUB
CHIHUAHUA DESERTSCRUB
SONORAN DESERTSCRUB

Arizona Upland Subdivision
Lower Colorado River Subdivision
Central Gulf Coast Subdivision
Plains of Sonora Subdivision
Vizcaiano Subdivision

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Incorporated in the classification system are contributions of plant geographers and ecologists in general usage throughout the Southwest, including those of Watson 1912; Shantz and Zon 1924; Morris 1935; Muller 1937, 1947; Gentry 1942; Shreeve 1942, 1951; Munz and Keck 1949, 1950; Nichol 1952; Benson and Darrow 1954; Castetter 1956; Shelford 1963; Kuchler 1964; Lowe 1964; Bradley and Deacon 1965; Flores et al. 1971; and Ornduff 1974.

The map base consisted of Sectional Aeronautical Charts, (scale 1:1,000,000) provided without navigational enhancement by the U.S. Department of Commerce. The choice of color for the various biotic communities follows the ecological color scheme proposed by Gaussen (1953) where dark, cold colors denote the wetter, colder ecosystems, light shades represent the more arid areas, and bright colors signify warm areas.

The boundaries of the biotic units were determined after extensive field investigation and consultation with all available published sources and from aerial photos, where feasible. We are particularly indebted to Rodney Engard and H. Scott Gentry, Desert Botanical Gardens, Phoenix; R. V. Moran, Balboa Park Natural History Museum, San Diego; Killiam Roever, Chemargo, Phoenix; Raymond M. Turner, U.S. Geological Survey, Tucson; R. H. Wauer, U.S. National Park Service, Santa Fe; Tom Wendt, University of Texas, Austin; And Bart Warnock, Sul Ross University, Alpine, Texas, who shared their special field knowledge and otherwise provided assistance.

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ERRATA

<u>Latitude</u>	<u>Longitude</u>	<u>Error</u>	<u>Corrected</u>
1. 36° 49' N	105° 34' W	(pink)	Great Basin Montane Scrub
2. 35° 53' N	109° 6' W	(white)	Plains Grassland
3. 34° 27' N	109° 46' W	(white)	Great Basin Grassland
4. 34° 12' N	111° 51' W	Plains of Sonora	Interior Chaparral
5. 33° 19' N	109° 24' W	Lower Colorado River Subdivision	Madrean Evergreen Woodland
6. 33° 19' N	107° 12' W	(green)	Desert Grassland
7. 32° 52' N	107° 12' W	(green)	Desert Grassland
8. 32° 14' N	103° W	(white)	Plains Grassland
9. 30° 57' N	107° 6' W	Mohave Desertscrub	Chichuahuan Desertscrub
10. 29° 15' N	107° 52' W	(white)	Madrean Evergreen Woodland
11. 27° 52' N	109° 21' W	Lower Colorado River Subdivision	Sinaloan Thronscrub

Comments and suggestions are solicited from field personnel. Please send suggestions to:

Rocky Mountain Forest and Range Experiment Station
Forest Sciences Laboratory
Arizona State University
Tempe, Arizona 85281

BIOTIC COMMUNITIES OF THE SOUTHWEST

by David E. Brown and Charles H. Lowe

TUNDRA FORMATION

FOREST FORMATION

- PETRA SUBALPINE CONIFER FOREST
- SIERRAN SUBALPINE CONIFER FOREST
- PETRA MONTANE CONIFER FOREST
- SIERRAN MONTANE CONIFER FOREST
- SINALOAN DECIDUOUS FOREST

WOODLAND FORMATION

- GREAT BASIN CONIFER WOODLAND
- MADREAN EVERGREEN WOODLAND
- CALIFORNIAN EVERGREEN WOODLAND

SCRUB FORMATION

- GREAT BASIN MONTANE SCRUB
- CALIFORNIAN COASTAL CHAPARRAL
- CALIFORNIAN COASTAL SAGESCRUB
- INTERIOR CHAPARRAL
- SINALOAN THORN SCRUB

GRASSLAND FORMATION

- SUBALPINE GRASSLAND
- PLAINS and GREAT BASIN GRASSLAND
- PLAINS GRASSLAND with SHINNEY OAK Qh
- CALIFORNIAN VALLEY GRASSLAND
- SEMI-DESERT GRASSLAND

DESERTSCRUB FORMATION

- GREAT BASIN DESERTSCRUB
- MOHAVE DESERTSCRUB
- CHIHUAHUA DESERTSCRUB

SONORAN DESERTSCRUB

- Lower Colorado River Subdivision
- Arizona Upland Subdivision
- Plains of Sonora Subdivision
- Central Gulf Coast Subdivision
- Vizcaino Subdivision



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CARTOGRAPHER
Vern H. Booth

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